

Application No.: 10/251,072

Docket No.: 60680-2005

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 13 (Cancelled)

14. (Previously Presented) A method for the deposition of an overlay layer onto the surface of a plain bearing, the bearing comprising a strong backing material having a layer of a first bearing material thereon, said overlay being deposited upon the surface of said first bearing material, the method comprising the steps of:

providing a bearing having a surface on which to deposit said overlay;
immersing said bearing in a plating solution having a supply of tin ions and an organic levelling agent in said solution;
making said bearing cathodic with respect to an anode in said solution; and
depositing an overlay of tin, apart from unavoidable impurities, said tin overlay also having said organic levelling agent included in a matrix thereof.

15. (Previously Presented) A method according to claim 14, wherein the overlay is deposited in a slot jig apparatus.

16. (Previously Presented) A method according to claim 15, wherein the plating solution is sparged through the slot towards the bearing bore.

17. (Previously Presented) A method according to claim 14, wherein a plating current density lies in the range from about 2 to 3 A/dm².

18. (Previously Presented) A method according to claim 15, wherein a plating current density lies in the range from about 2 to 3 A/dm².

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Please add the following new claims:

19. (New) A method for manufacturing a plain bearing comprising a strong backing material having a layer of a first bearing material thereon on which a interlayer material is provided to act as a diffusion barrier, the method comprising the steps of:

immersing said plain bearing in a plating solution having a supply of tin ions and an organic levelling agent in said solution;

making said plain bearing cathodic with respect to an anode in said solution; and depositing an overlay of tin, apart from unavoidable impurities, on the surface of said first bearing material, said tin overlay also having said organic levelling agent included in a matrix thereof, characterized in that the organic levelling agent is one of nonylphenolpolyglycolether and pyrocatechol.

20. (New) A method according to claim 19, wherein the interlayer is selected from the group comprising: nickel, cobalt, copper, silver, iron, and alloys thereof.

21. (New) A method according to claim 19, wherein the plating solution has the following composition:

Sn ⁺⁺	32-38 g/l
SnSO ₄	58-68 g/l
H ₂ SO ₄	185-210 g/l
Cu	<50 mg/l
Cl-	<20 parts per million (ppm), and

an organic levelling agent, being nonylphenolpolyglycolether in a methanol carrier in the range from 25-55 ml/l.

22. (New) A method according to claim 20, wherein the plating solution has the following composition:

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Sn ⁺⁺	32-38 g/l
SnSO ₄	58-68 g/l
H ₂ SO ₄	185-210 g/l
Cu	<50 mg/l
Cl-	<20 parts per million (ppm), and

an organic levelling agent, being nonylphenolpolyglycoether in a methanol carrier in the range from 25-55 ml/l.

23. (New) A method according to claim 19, wherein the overlay is deposited in a slot jig apparatus.

24. (New) A method according to claim 19, wherein the plating solution is sparged through the slot towards the bearing bore.

25. (New) A method according to claim 19, wherein a plating current density lies in the range from 2 to 3 A/dm².

26. (New) A method according to claim 19, wherein the plating solution is sparged through the slot towards the bearing bore and wherein a plating current density lies in the range from 2 to 3 A/dm².

27. (New) A plain bearing made by the method of claim 19.